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Filed Electronically

Hon. Craig L. Wellerson, P.J.Cv. Ocean County Superior Court 100 Hooper Ave., PO Box 2191 Toms River, NJ 08754

Re: DEP v. Sam S. Russo et al. (OCE L-1974-19)

Dear Judge Wellerson:

This letter summarizes the findings from DEP's soil, sediment and water samples collected at Sam S. Russo's property on September 10 and 11, 2019.

Soil samples confirm that Defendants have imported soil contaminated with hazardous PCBs and pesticides for burial on Russo's property. Water samples show Defendants are discharging runoff contaminated with high levels of fecal bacteria and nutrients into the stream that runs along the southern boundary of the property. DEP also found high levels of arsenic in sediments where a drainage pipe from Russo's property empties to the stream. These findings bolster DEP's application for a



preliminary injunction to stop all further deliveries of fill dirt, concrete, asphalt millings, woodchips, leaves, grass clippings, and food waste until Defendants obtain stormwater discharge permits and the court rules on a remedy for unlawful disposal of solid waste, including contaminated fill, on Russo's property.

On September 18, 2019, I sent the court a letter describing DEP's initial findings from test pits and soil borings showing how Russo has created a landfill of imported dirt mixed with woodchips, grass clippings, concrete and other debris that is more than 20 feet high. The pits and borings also confirmed that Russo buried asphalt millings, concrete, woodchips, and leaves in fields and roadways all over his property without any solid waste disposal permits. A map and pictures of DEP's findings are included in the certification of Thomas Farrell submitted with my September 18 letter. (Farrell Cert. Exs. A through C, Pa441-Pa456.)

Enclosed with this letter are supplemental certifications from Bryan Barrett and Mr. Farrell describing results from laboratory testing of DEP's samples. DEP sent full copies of its lab results to Defendants on October 7, 2019. This

 $^{^{1}}$ Due to their length - the reports from TestAmerica are more than 1,600 pages long - the full laboratory results are not filed with this letter but have been provided to Counsel and are available at

afternoon, Counsel for Defendants sent me partial sampling results from Defendants' consultant, indicating that the full results will not be available before the end of this week. DEP has not yet had an opportunity to review these newly-provided lab results.

Soil Sampling Results

Although Defendants maintain that the fill Russo accepted is "clean fill" and therefore beyond DEP regulation, <u>see</u> Russo Br. at 25-26, the laboratory results show that Russo accepted and buried fill material contaminated with PCBs and pesticides.

Laboratory analyses found PCBs in six soil samples and one sediment sample. (Farrell Supp. Cert. ¶13, Pa469; id. ¶19, Pa470; id. ¶27, Pa472.) In two of these soil samples, PCB levels were above DEP's promulgated soil remediation standards. (Farrell Supp. Cert. ¶16, Pa470.) The lab results also show pesticide levels in six soil samples, with levels in one sample above the soil remediation standards. (Farrell Supp. Cert. ¶17, Pa470; id. ¶20, Pa471.) Levels above the remediation standards means that this fill material meets the definition of "contaminated soil" in DEP's solid waste regulations at N.J.A.C.

the court's request.

 $7:26-1.4^2$ and must be considered solid waste. (Farrell Supp. Cert. ¶11, Pa469.)

The samples with PCB and pesticide levels above DEP's remediation standards are shown below in Table 1. A map of the sample locations referenced here is enclosed as Exhibit A to Mr. Barrett's supplemental certification. (Barrett Supp. Cert. Ex. A, Pa464.)

Table 1: Soil sample readings above soil remediation standards for hazardous contaminants.

Location	Sample depth	Observations	Compound	Result (ppm)	Soil Remediation Standard (PPM)
DG-6	3-4'	Non-native soils with intermittent asphalt millings	PCBs (Aroclors 1242 + 1260)	0.277	0.2
DG-8	22-24'	Non-native soils with pieces of brick,	PCBs (Aroclor 1254)	1.7	0.2
		intermittent asphalt millings, leaves, and wood chips	Dieldrin	0.062	0.04
			Aldrin	0.074	0.04

PCBs = polychlorinated biphenyls

PPM = parts per million

Soil Remediation Standards are the residential standards promulgated at N.J.A.C. 7:26D Table 1A

Based on these findings that Russo has accepted loads of contaminated material for burial on his property, the court should enjoin all further deliveries of fill dirt, soil, asphalt

² "'Contaminated soil' means soil, soil-like material, or mixtures of soil with other material containing concentrations of one or more contaminants that exceed the residential direct contact soil remediation standards or non-residential direct contact soil remediation standards, whichever is more stringent, as set forth in N.J.A.C. 7:26D, Remediation Standards." N.J.A.C. 7:26-1.4.

millings, and concrete while it hears DEP's summary action for a permanent injunction and for cleanup of this property.

Water Sampling Results

The lab results for the water samples showed fecal bacteria levels well above DEP's surface water quality standards at a pipe and a ditch that discharge stormwater from Russo's property into the stream. (Barrett Supp. Cert. ¶¶7-8, 15, Pa458-Pa460.) Upstream and downstream of these two discharge points, readings were at or below the standards, meaning that bacteria levels cannot be attributed to sources other than Russo's operation. (Barrett Supp. Cert. ¶¶17-18, Pa461.) Table 2, below, summarizes the bacteria results. PS-2 is a pipe draining to the stream from Russo's property; PS-3 is a drainage ditch that empties into the stream.

Table 2: Water sampling results for bacteria.

		SWQS				
Parameter	PS-1	PS-2	PS-3	PS-4	PS-5	(CFU / 100mL)
E. Coli	135.4	>2,419.6	1,553.1	24.6	248.1	235
Fecal Coliform	<180	>160,000	7,900	<180	200	770
Enterococci	200	3,300	400	<180	200	104
Streptococci	450	7,900	3,300	<180	200	
Total Coliform	930	>160,000	2,300	<180	200	

MPN = Most Probable Number of bacteria per 100 milliliters of water

CFU = Colony Forming Units of bacteria per 100 milliliters of water (equivalent to MPN)

SWQS = DEP's Surface Water Quality Standards at N.J.A.C. 7:9B-1.14(d)

At these two discharge points, the lab results also show high levels of nutrients like phosphorous, nitrogen, nitrites

and nitrates, and ammonia. (Barrett Supp. Cert. ¶¶19-24, Pa461-Pa463.) Chemical oxygen demand and total organic carbon levels are also higher at PS-2 and PS-3, indicating the presence of a variety of organic compounds and nutrients in the water. (Barrett Supp. Cert. ¶22, Pa462.) These elevated levels of organic compounds and nutrients are consistent with runoff from composting and vegetative waste operations, especially where high-nutrient feedstocks like food waste and grass clippings are decomposing. (Barrett Supp. Cert. ¶23, Pa462.) Total suspended solids and total dissolved solids are also significantly higher at PS-2. These readings could indicate the presence of suspended sediment from soil disturbance. (Barrett Supp. Cert. ¶24, Pa463.) These results are summarized in Table 3, below.

Table 3: Water sampling results for nutrients, organic chemicals, and solids.

Parameter		SWQS				
Parameter	PS-1	PS-2	PS-3	PS-4	PS-5	(mg/L)
TSS	4	1,960	8	9	7	40 mg/L
TDS	121	700	340	154	150	500 mg/L
TOC	3.14	20.6	5.37	2.16	2.62	
COD	15	53.9	25.5	7.85	13.9	
Total P	0.0302	1.1	0.0768	0.0531	0.0998	0.1 mg/L
Ammonia	0.053	1.8	0.108	ND	0.057	
Nitrite + Nitrate	0.348	0.0469	0.109	0.0213	0.0264	10 mg/L
TKN	0.18	2.61	0.478	0.119	0.204	

TSS = Total suspended solids

TDS = Total dissolved solids

TOC = Total organic carbon

COD = Chemical oxygen demand

Total P = Total phosphorous

TKN = Total Kjeldahl nitrogen

DEP's opening brief describes the environmental risks from unpermitted discharges of these types of pollutants. See DEP Br. at 16-21. DEP's sample results show that Defendants are actually discharging these regulated pollutants, in some instances at levels above regulatory standards. This is further evidence that Defendants require discharge permits under the Water Pollution Control Act and DEP's regulations. N.J.S.A. 58:10A-6(a); N.J.A.C. 7:14A-2.1(d). The court should enjoin further receipt and processing of fill dirt, soil, asphalt millings, concrete, food waste, grass, leaves, and woodchips while it hears DEP's summary action to enforce these unpermitted discharges.

Sediment Sampling Results

Finally, in a sediment sample taken at PS-2, DEP found levels of PCBs and arsenic that exceed standards for likely environmental harm described in DEP guidance. (Farrell Supp. Cert. ¶¶23-27, Pa471-Pa472.) DEP did not find PCBs in sediment samples upstream or downstream of PS-2. Arsenic levels in the upstream and downstream samples were also within normal ranges and were only a fraction of the levels found at PS-2. This contamination is worrisome and may require cleanup by Defendants. (See Farrell Supp. Cert. ¶¶25-26, Pa472.) At the very least, the court should enjoin further deliveries of

potentially contaminated materials such as fill dirt, soil, asphalt millings, and concrete that may contribute to the contaminant levels pending a hearing on DEP's summary action to remedy solid waste violations.

Conclusion

Based on DEP's findings and those summarized in my letter of September 18 that Russo is operating a solid waste facility in violation of the Solid Waste Management Act, DEP renews its application for a preliminary injunction against all incoming loads of fill dirt, concrete, asphalt millings, food waste, woodchips, leaves, and grass clippings. The sampling results described here confirm that some incoming loads of fill materials are contaminated with hazardous substances. The results also show Russo is discharging pollutants to the stream in violation of the Water Pollution Control Act by his handling and disposal of organic wastes, and his mixing and disposal of animal manure mixed with fill dirt, woodchips, grass clippings, and leaves.

Respectfully submitted,
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c: Counsel of Record (by electronic filing)